Mx magnetometer as a veto sensor for the GNOME experiment

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We present our activities aiming at a construction of a self-oscillating Mx magnetometer. The magnetometer is intended to operate as a veto sensor for the Krakow station of the Global Network of Optical Magnetometer for Exotic physics. The network searches for hiterto undiscovered exotics spin couplings, which would induced torque on spins and hence affect readouts of the magnetometer. To distigush the readouts induced by magnetic and non-magnetic spin couplings, we will use an external sensor, operating in an unshielded magnetic environment, which would be predominantly sensitive to magnetic noise. In such a way, we can discriminate readings associated with real magnetic fields and identify false positive signals recorded by the network.